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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/544,897	02/02/2006	Ralf Dunkel	CS-8582/LeA 36,354	6478

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BAYER CROPSCIENCE LP  
Patent Department  
100 BAYER ROAD  
PITTSBURGH, PA 15205-9741

EXAMINER
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GRAZIER, NYEEMAH

ART UNIT	PAPER NUMBER
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1626

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/25/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/544,897	<b>Applicant(s)</b> DUNKEL ET AL.	
	<b>Examiner</b> Nyeemah Grazier	<b>Art Unit</b> 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 19-35 is/are pending in the application.
- 4a) Of the above claim(s) 27, 29, 30, 34 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-23, 28 and 31 is/are rejected.
- 7) ☒ Claim(s) 24 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/8/05, 9/1/06</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **I. ACTION SUMMARY**

Claims 19-35 are currently pending in the instant application and are subject to the required restrictions and elections as described below. Claims 1-18 have been canceled.

### **II. PRIORITY**

This application is a 371 of PCT/EP04/01053, filed on February 5, 2004 and claims benefit under 35 U.S.C. 119(a)-(d) to foreign applications Germany 10306244.0, filed February 14, 2003 and Germany 10321270.1, filed May 13, 2003.

### **III. INFORMATION DISCLOSURE STATEMENT**

The information disclosure statement (IDS) submitted on September 1, 2006 and August 8, 2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

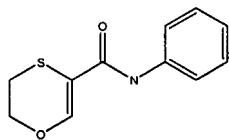
### **IV. LACK OF UNITY OF INVENTION**

Restriction is required under 35 U.S.C. 121 and 372 because the instant application contains the following inventions or groups of inventions which are not so linked to form a single general inventive concept under PCT Rule 13.1. Therefore a restriction is required according to the provision of PCT Rule 13.2.

The instant application contains Markush practice. However, pursuant to Section B (Markush Practice) MPEP § 1850 (B), the invention does not meet the unity of invention criteria because (1) the core structure is not the unifying criteria and (2) the variables do not belong to a "recognized class of chemical compounds in the art to which the invention pertains." MPEP § 1850 (B) (2004).

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Formula (I) as recited in Claim 1 is the genus. The special technical feature is the



following structural core . Unity of invention is lacking because the core is not novel, *infra*. Claims 19-35 are drawn to more than one inventive concept (as defined by PCT Rule 13), and accordingly, a restriction is required according to the provision of PCT Rule 13.2.

PCT Rule 13.2 states that the international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept (requirement of unity of invention). PCT Rule 13.2 states unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features.

Annex B, Part 1 (b), provides that “special technical features” mean those technical features, which, as a whole, define a contribution over the prior art.

Annex B, Part 1 (e), provides combinations of different categories of claims and states: “The method for determining unity of invention under Rule 13 shall be construed as permitting, in particular, the inclusion of any one of the following combinations of claims of different categories in the same international application:

(i) in addition to an independent claim for a given product, an independent claims for a process specially adapted for the manufacture of the said product, and an independent claim for use of the said product, or

(ii) in addition to an independent claim for a given process, an independent claim for an apparatus or means specially designed for carrying out the said process, or

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(iii) in addition to an independent claim for a given product, and independent claim for a process specially adapted for the manufacture of the said product, and an independent claim for an apparatus or means specially designed for carrying out the said process,..."

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Group I: Claims 19-26, 28, 31-33 drawn to the compounds of formulae (I), (IV), (VI), and (VIII).

Group II: Claims 27 and 30 drawn to the method of preparing the compound and composition of Formula (I).

Group III: Claim 34, drawn to the intermediate compound of formula (II).

Group IV: Claim 35, drawn to the intermediate compound of formula (III).

Group V: Claim 29, drawn to the method of using the compounds of formula (I).

Applicant is encouraged to particularly describe a compound that is not listed above by specifically pointing out the definitions of each variable.

#### Advisory of Rejoinder

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable,

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the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Telephone Inquiry

A telephone call was made to Richard Henderson, Esquire on or about March 29, 2007 to request an oral election to the above restriction requirement. Mr. Henderson elected Group I with traverse.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

**V. REJECTION**

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***Claim Rejections - 35 USC § 103***

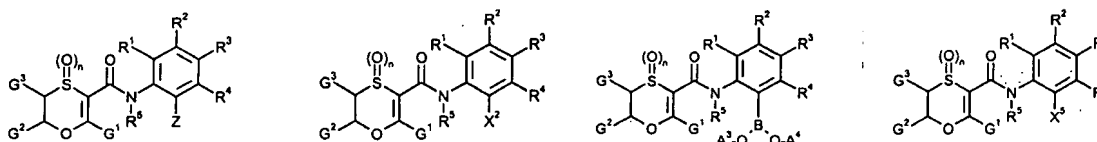
The following is a quotation of 35 U.S.C. § 103(a) that forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

*Graham v. John Deere Co.* set forth the factual inquiries necessary to determine obviousness under 35 U.S.C. § 103(a). See *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Specifically, the analysis must employ the following factual inquiries:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 19-23, and 28 are rejected over JP 2001302605 A2. The instant invention is drawn to a compound of formula (I), (IV), (VI) and (VIII), which are oxathiincarboxamides used for controlling unwanted microorganisms.

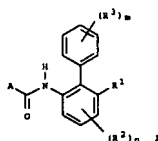


$G^1$  is halogen, trifluoromethyl, difluoromethyl, or cyclopropyl;  $n$  is 0-2;  $Z$  represents *inter alia* phenyl, C2-C20-alkyl or C1-C20-alkyl that is mono or polysubstituted from the group halogen and cycloalkyl;  $X^2$  represents bromine or iodine;  $X^5$  represents optionally substituted C2-C20 hydroxyalkyl.

***The Scope and Content of the Prior Art (MPEP §2141.01)***

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JP 2001302605 A2 teaches the preparation of biphenyl compound of formula (I) as agrochemical fungicides.



Variable A is A10



Wherein "X" may represent methylene, sulfur atom, SO or SO<sub>2</sub>. See, p. 2, col. 1, last paragraph. R<sub>4</sub> may represent halogen or C<sub>1</sub>-C<sub>4</sub> haloalkyl. Id.

**The Difference Between the Prior Art and the Claims (MPEP §2141.02)**

The difference between the instant invention and the prior art is in scope. The instant invention and the prior art have the same utility and have the substantially the same core.

**Resolving Level of Ordinary Skill in the Pertinent Art**

The pertinent art is chemistry. The motivation to make claimed compound derives from the expectation that structurally similar compounds are generally expected to have similar properties and have similar utilities. In re Gyurik, 596 F. 2d 1012, 201 USPQ 552 (CCPA 1979).

**Prima Facie Obviousness-The Rational and Motivation (MPEP §2142-2413)**

It is well established that consideration of a reference is not limited to the preferred embodiments or working examples, but extends to the entire disclosure for what it fairly teaches, when viewed in light of the admitted knowledge in the art, to a person of ordinary skill in the art. In re Boe, 148 USPQ 507 (CCPA 1966). For an invention to be obvious, two things must be found in the prior art: 1) the suggestion of the invention, and 2) the expectation of success. In re Vaeck, 20 USPQ.2d 1438, 1441 (Fed. Cir. 1991).



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The prima facie case for obviousness is derived from the preferred teaching of the references displayed in Table on page 28. The table shows subgenus of Formula (I) wherein A is A10. The compounds listed in the table is methyl substituted oxathiincarboxyl amide and not halolalkyl substituted oxathiincarboxyl amide.

The expectation of success is derived from the general teaching of the prior art of reference because the publication discloses that the invention of Formula (I) is an agrochemical fungicide. Thus, although the claims are not identical, the prior art of reference suggests the instant invention.

### *Claim Rejections - 35 USC § 103*

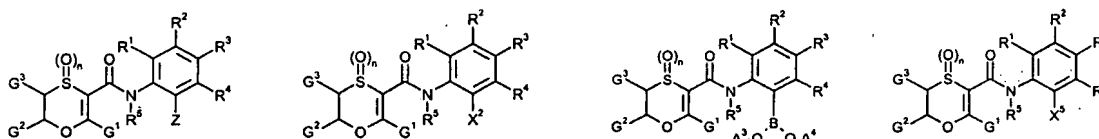
The following is a quotation of 35 U.S.C. § 103(a) that forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

*Graham v. John Deere Co.* set forth the factual inquiries necessary to determine obviousness under 35 U.S.C. § 103(a). See *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Specifically, the analysis must employ the following factual inquiries:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 19-23 and 28 are rejected over JP 08176112 A2. The instant invention is drawn to a compound of formula (I), (IV), (VI) and (VIII), which are oxathiincarboxamides used for controlling unwanted microorganisms.

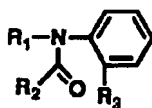


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G1 is halogen, trifluoromethyl, difluoromethyl, or cyclopropyl; n is 0-2; Z represents *inter alia* phenyl, C2-C20-alkyl or C1-C20-alkyl that is mono or polysubstituted from the group halogen and cycloalkyl; X2 represents bromine or iodine; X5 represents optionally substituted C2-C20 hydroxyalkyl.

**The Scope and Content of the Prior Art (MPEP §2141.01)**

JP 08176112 A2 teaches the preparation of biphenyl compound of formula (I) as agrochemical fungicides.



Variable R2 is B-3



**B-3**

Wherein "X" may represent methylene, or oxygen. See, p. 2, col. 1. R8 may represent a halogen atom or C1-C8 haloalkyl. Id. R3 is phenyl (C-1). Id.

**The Difference Between the Prior Art and the Claims (MPEP §2141.02)**

The difference between the instant invention and the prior art is in scope. The instant invention and the prior art have the same utility and have the substantially the same core.

**Resolving Level of Ordinary Skill in the Pertinent Art**

The pertinent art is chemistry. The motivation to make claimed compound derives from the expectation that structurally similar compounds are generally expected to have similar properties and have similar utilities. In re Gyurik, 596 F. 2d 1012, 201 USPQ 552 (CCPA 1979).

**Prima Facie Obviousness-The Rational and Motivation (MPEP §2142-2413)**

It is well established that consideration of a reference is not limited to the preferred embodiments or working examples, but extends to the entire disclosure for what it fairly

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teaches, when viewed in light of the admitted knowledge in the art, to a person of ordinary skill in the art. In re Boe, 148 USPQ 507 (CCPA 1966). For an invention to be obvious, two things must be found in the prior art: 1) the suggestion of the invention, and 2) the expectation of success. In re Vaeck, 20 USPQ.2d 1438, 1441 (Fed. Cir. 1991).

The prima facie case for obviousness is derived from the preferred teaching of the references. The expectation of success is derived from the general teaching of the prior art of reference because the publication discloses that the invention of Formula (I) is an agrochemical fungicide. Thus, although the claims are not identical, the prior art of reference suggests the instant invention.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. § 103(a) that forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

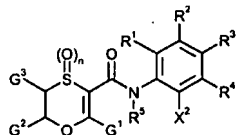
*Graham v. John Deere Co.* set forth the factual inquiries necessary to determine obviousness under 35 U.S.C. §103(a). *See Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Specifically, the analysis must employ the following factual inquiries:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 30 is rejected over Hahn et al., "Synthesis of Trifluoromethylated Dihydro-1,4-oxathiin-3-carboxanilides through polymer-bound activated ester," *Heterocycles*, vol.

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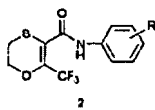
48(11), 1998, 2253-2261.. The instant invention is drawn to a compound of formula (IV), which are oxathiincarboxamides used for controlling unwanted microorganisms.



G1 is halogen, trifluoromethyl, difluoromethyl, or cyclopropyl; n is 0-2 and X2 represents bromine or iodine.

**The Scope and Content of the Prior Art (MPEP §2141.01)**

Hahn et al. teaches the preparation of biphenyl compound of formula (2) as agrochemical



fungicides.

Variable "R" may represent chloro at the 2 position.

**The Difference Between the Prior Art and the Claims (MPEP §2141.02)**

The difference between the instant invention and the prior art is in scope. The instant invention is drawn to bromo or iodo substituted phenyl, while the prior art of record is drawn to chloro substituted ring. Members of a homologous series must possess unexpected properties not possessed by the homologous compounds disclosed by the prior art. In re Hass, 141 F.2d 127, 60 USPQ 548 (CCPA 1944). The instant invention and the prior art have the same utility and have the substantially the same core.

**Resolving Level of Ordinary Skill in the Pertinent Art**

The pertinent art is chemistry. The motivation to make claimed compound derives from the expectation that structurally similar compounds are generally expected to have similar properties and have similar utilities. In re Gyurik, 596 F. 2d 1012, 201 USPQ 552 (CCPA 1979).

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**Prima Facie Obviousness-The Rational and Motivation (MPEP §2142-2413)**

It is well established that consideration of a reference is not limited to the preferred embodiments or working examples, but extends to the entire disclosure for what it fairly teaches, when viewed in light of the admitted knowledge in the art, to a person of ordinary skill in the art. In re Boe, 148 USPQ 507 (CCPA 1966). For an invention to be obvious, two things must be found in the prior art: 1) the suggestion of the invention, and 2) the expectation of success. In re Vaeck, 20 USPQ.2d 1438, 1441 (Fed. Cir. 1991).

The prima facie case for obviousness is derived from the teaching of the reference. The reference states that "5,6-dihydro-2-methyl-1,4-oxathiin-3-carboxanilide (1) or carboxin is a well-known systemic fungicide used for seed treatment, and its toxicity arises from the  $\alpha,\beta$ -unsaturated carboxanilide group *cis* to methyl group. Trifluoromethyl group has received increasing interest owing to its unique nature for material sciences and potential biological activities for pharmaceuticals and agrochemicals." Hahn et al. at 2253. The expectation of success is derived from the general teaching of the prior art of reference because the publication discloses that the invention of Formula (I) is an agrochemical fungicide. Thus, although the claims are not identical, the prior art of reference suggests the instant invention.

**VI. CONCLUSION**

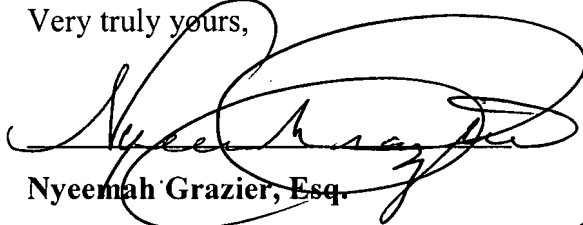
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nyeemah Grazier whose telephone number is (571) 272-8781. The examiner can normally be reached on Monday through Friday from 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane, can be reached on (571) 272 - 0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

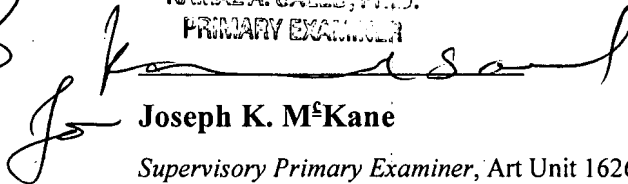
Very truly yours,



**Nyeemah Grazier, Esq.**

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